CASE REPORTS

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Pericarditis in Association With Ulcerative Colitis

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INFLAMMATION of the pericardium may be present in a variety of systemic illnesses.[1] Seven cases of pericarditis seen in association with inflammatory bowel disease have previously been reported.[2-5] In only two of these was the onset of pericarditis temporally related to the diagnosis of bowel disease. We report cases of two patients in whom pericarditis and ulcerative colitis were simultaneously diagnosed and in whom pericarditis may have been a presenting symptom of ulcerative colitis.

Reports of Cases

CASE 1. A 12-year-old white girl was admitted to hospital on March 20, 1972, with a two-week history of fever and bloody diarrhea. She said she had had no chest pain; however, a pericardial friction rub was noted. Findings on roentgenogram of the chest suggested a pericardial effusion, and an electrocardiogram showed abnormalities consistent with pericarditis (Figure 1). Cultures of a stool specimen grew no pathogens, and multiple studies of stool specimens gave negative results for ova and parasites. A fluorescent antinuclear antibody titer was normal. Sigmoidoscopy showed an erythematous, cobblestoned and friable mucosa compatible with acute ulcerative colitis. Because of a progressively enlarging cardiac silhouette, the patient was given 20 mg of prednisone per day. The cardiac silhouette subsequently decreased in size. She was discharged from the hospital on April 19, 1972. Administration of prednisone was discontinued two months following discharge. On February 23, 1973 she was readmitted to hospital because of fever and chest pain of five days' duration. Radiographic examination showed an enlarged cardiac silhouette and a left pleural effusion. No friction rub was noted. Daily administration of 40 mg of prednisone resulted in rapid amelioration of symptoms. Several subsequent attempts to discontinue prednisone therapy were unsuccessful. Recurrence of bloody diarrhea on November 12, 1973 necessitated treatment with salicylazosulfapyridine and steroid enemas. In June 1975, severe diarrhea again recurred and was poorly responsive to medical management. A total proctocolectomy with an ileostomy was done on July 13, 1975. Following colectomy, episodes of chest pain occurred intermittently and were successfully treated with indomethacin. She has been free of symptoms since July 2, 1976.

CASE 2. A 24-year-old white man was admitted to hospital on April 5, 1976, with complaint of chest pain. Ten weeks earlier he had had onset of tenesmus and bloody stools. Five weeks before admission he noted malaise, myalgias and aching in his chest. Five days before admission chest pains intensified. A pericardial friction rub was present. There were no stigmata of pericardial tamponade. Roentgenogram of the chest showed enlargement of the cardiac silhouette. An echocardiogram showed a large pericardial effusion (Figure 2). A pericardiocentesis was done with the finding of sterile serosanguinous fluid containing 2,500 leukocytes and 4,000 red blood cells per cu mm. The leukocyte determination showed 66 percent lymphocytes and 34 percent polymorphonuclear cells. The protein content was 4.6 grams per dl. Sigmoidoscopy showed friable, granular mucosa. Findings of examination of a rectal biopsy specimen were consistent with ulcerative colitis. Results of skin tests for tuberculosis, histoplasmosis and coccidioidomycosis were negative. Results of tests on acute-phase and convalescent-phase sera for Coxsackie virus and adenovirus were negative, as were results of a mononucleosis spot test, lupus induction test and latex fixation test. On the fifth hospital day, 12 mm of pulsus paradoxus was noted. After aspirin, salicylazosulfapyridine and hydrocortisone enemas were administered, radiographic and echo-

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cardiographic examinations showed resolution of the pericardial effusion; chest pain disappeared. Following discharge, chest pain recurred and treatment was carried out with prednisone, which was discontinued on September 30, 1976. He has remained free of symptoms.

Discussion

Inflammatory bowel disease may have a variety of extraintestinal manifestations including involvement of the joints, skin and biliary system.[6-9] The association of pericarditis and inflammatory bowel disease had been reported in 11 previous cases;[2-5,10,11] in four of these, only brief reference to pericarditis[10] or carditis[11] was made. Of the seven cases reported in detail,[2-5] in two there was simultaneous or nearly simultaneous onset of evidence of inflammatory bowel disease and pericarditis, while in five there was an interval of three to six years between recognition of the two diseases. In four of these five, inflammatory bowel disease preceded pericarditis. In both our patients, onset of pericarditis and onset of ulcerative colitis had occurred within five weeks, thereby strengthening the argument for a causal relationship between the two diseases.

Pericarditis seen in association with inflammatory bowel disease may be relapsing. This was true in two previously reported cases[2,4] and in our case 1. In our patient, colectomy appears to have been curative for both diseases. In the seven previously reported cases, other extracardiac manifestations of inflammatory bowel disease were common, including arthritis in three and skin lesions in five. These manifestations have so far been absent in our two patients.

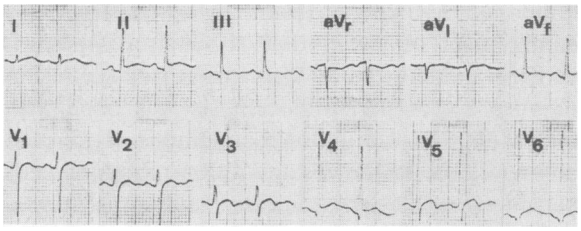

Figure 1.—Electrocardiogram in case 1 showing PR depression, ST elevation and T wave inversion characteristic of pericarditis.

In one of the previously reported cases,[3] tamponade was described. We have seen a 62-year-old man, in whom no cause for pericarditis could be found, who presented in tamponade requiring pericardiectomy. In his case, ulcerative colitis had been diagnosed 24 years earlier and had subsequently remained quiescent. We have not included this case with the two others because of the long interval between onset of bowel disease and onset of pericarditis, which we feel increases the likelihood that in this patient the two diseases were unrelated.

Summary

Percarditis and ulcerative colitis were simultaneously diagnosed in each of two patients. In neither patient could a cause for pericarditis be identified. It is suggested that pericarditis may have been a presenting symptom of inflammatory bowel disease. Recurring pericarditis in one patient appears to have been cured by colectomy.

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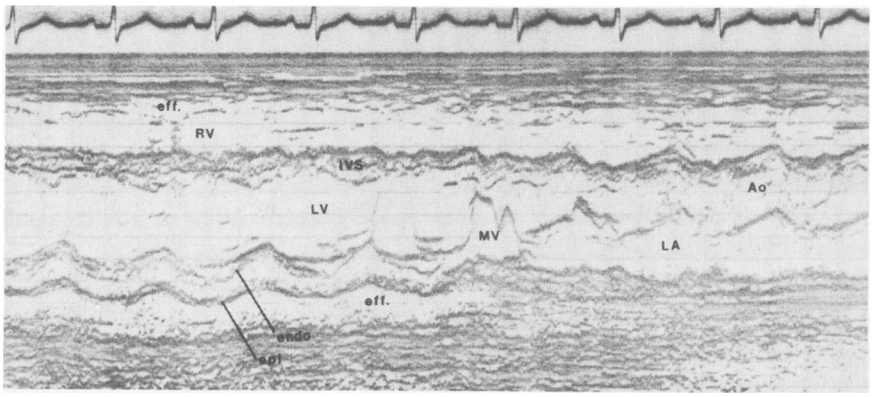

Figure 2.—Echocardiogram in case 2 showing pericardial effusion. Note obliteration of the effusion as the echo beam is swept cephalad toward the left atrium (left to right). Ao = aorta; eff = effusion; endo = endocardium; epi = epicardium; IVS = intraventricular septum; LA = left atrium; LV = left ventricle; MV = mitral valve; RV = right ventricle.